

Notice of Allowability

Application No.

09/911,686

Applicant(s)

YAMADA ET AL.

Examiner

Art Unit

Brian T. Pendleton

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment on 12/27/04.
2. ☒ The allowed claim(s) is/are 1,3-27 and 29-32.
3. ☒ The drawings filed on 24 July 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☒ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Allowable Subject Matter

Claims 1, 3-27 and 29-32 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the closest prior art reference, Inanaga, discloses an audio signal processing device for performing virtual acoustic image localization processing comprising digital signal processing means, a sensor for detecting the state of motion of a listener, an A/D converter for converting the analog detection signals, and control means for performing control so as to change the transmission characteristics of the digital signal processing means. However, Inanaga does not disclose nor suggest that the A/D converter consists of a one-bit A/D converter which converts input analog signals into one-bit digital signals as required by claim 1. Per claim 15, Inanaga does not disclose a one bit quantizer for converting analog detection signals from a sensor that detects a state of motion of a listener into digital signals and control means for performing control so as to modify the transmission characteristics of an audio signal according to the output signals from the one bit quantizer. Claim 27 recites an A/D converter for converting analog detection signals into digital signals wherein said A/D converter is a one-bit A/D converter. As stated above, there was no disclosure nor suggestion in Inanaga to modify the reference to comprise a one-bit analog/digital converter for converting the analog movement detection signals. Claim 32 calls for a signal processing device having an image display device for reproducing images before either one eye or both eyes of a listener, A/D converter for converting into digital signals analog detection signals from a sensor which detects a state of motion of the listener, control means for performing control so as to change the transmission

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characteristics of input audio signals processed by digital signal processing means according to output signals from the A/D converter and for performing control so as to update display content or display position in the image display device wherein part of the A/D converter is formed as part of the digital signal processing means. Inanaga does not disclose an image display device and updating its content or position according to output signals from the A/D converter. As a result, the independent claims 1, 15, 27 and 32 and their dependents are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 7/25/00. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b). Examiner incorrectly stated that the certified copy was received in the prior Office Action.

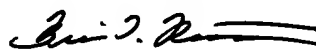
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (571) 272-7527. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian T. Pendleton
Examiner
Art Unit 2644



**BRIAN PENDLETON
PATENT EXAMINER**

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